

Applicant: XIAOHUA SHI, BU QI CHENG AND GUEI-YUAN LUEH
Title: INSTRUCTION SCHEDULING
Docket No.: ITL 1096US (P18491)
Express Mail: EV 372702094 US
Atty: Sanjeev K. Singh Under 37 C.F.R. § 10.9(b), Reg. No. 28,994, (713) 468-8880

Sheet 1 of 4

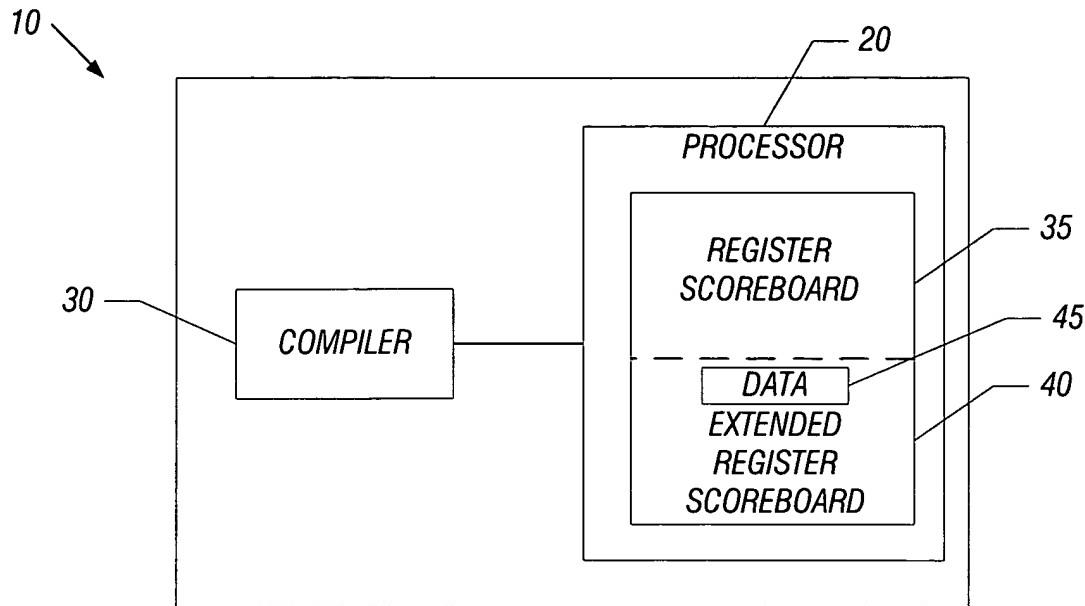


FIG. 1

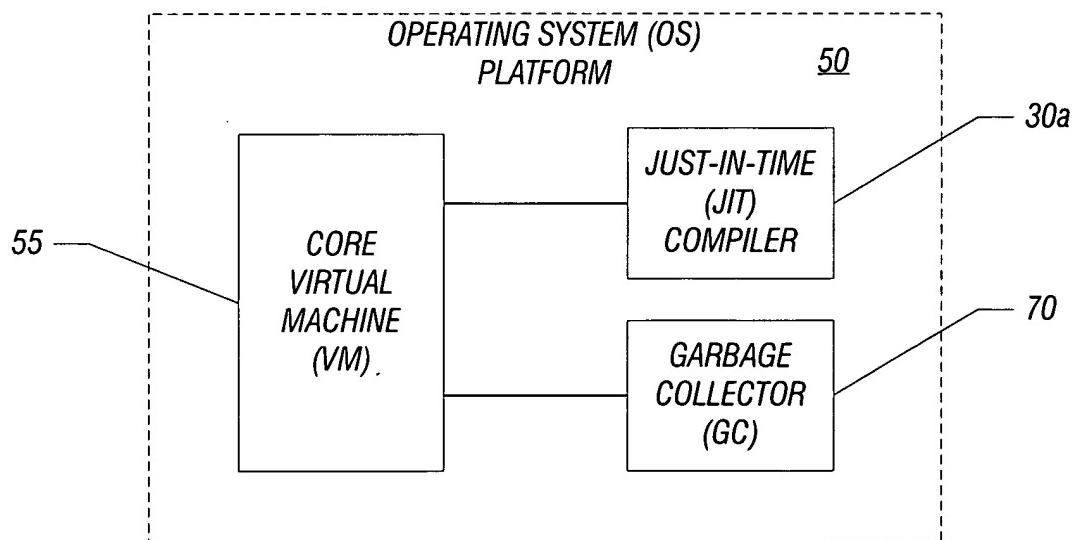


FIG. 2

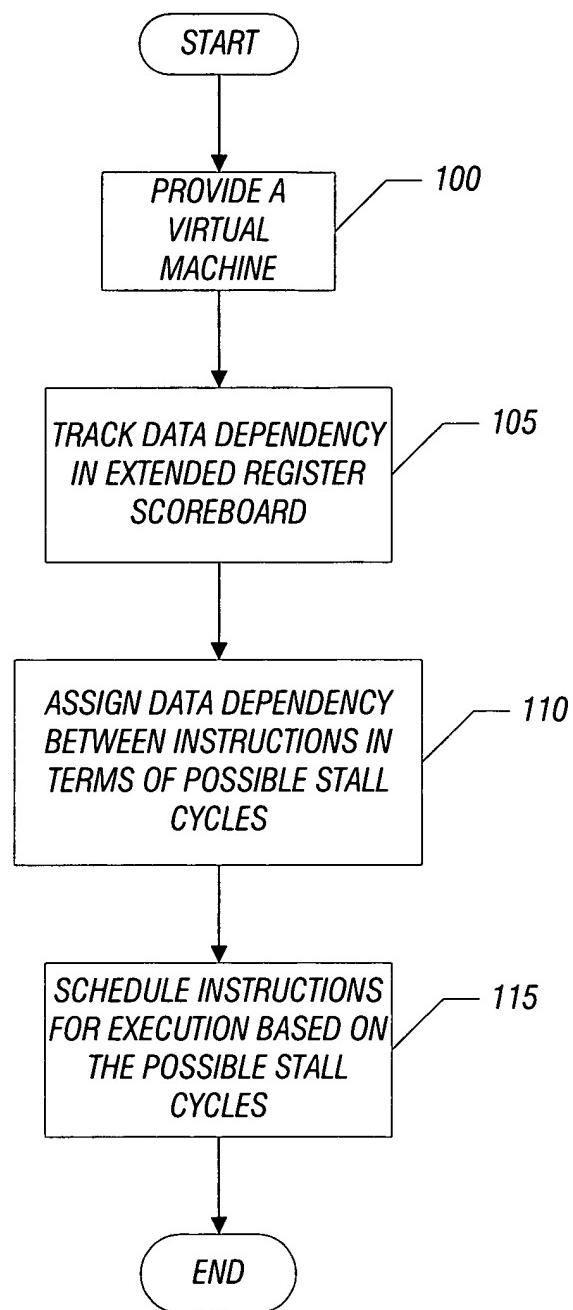


FIG. 3

I0: mov r0, r1
 I1: mov r2, 0x3
 I2: mov r3, 0x63
 I3: add r12, r1, 0x8
 I4: ldr lr, [r1, 0x4]
 I5: cmp lr, r2

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FIG. 4

| | GAP | G_C | UP | DWN | L | L0 | I0 | I1 | I2 | I3 | I4 | I5 | |
|----|-----|-----|----|-----|---|----|----|----|----|----|----|----|--|
| I0 | 0 | \ | -1 | 6 | 1 | 1 | \ | | | | | | |
| I1 | 0 | \ | -1 | 5 | 2 | 1 | -1 | \ | | | | | |
| I2 | 0 | \ | -1 | 6 | 3 | 1 | -1 | -1 | \ | | | | |
| I3 | 0 | \ | -1 | 6 | 4 | 1 | -1 | -1 | -1 | \ | | | |
| I4 | 0 | \ | -1 | 5 | 5 | 1 | -1 | -1 | -1 | -1 | \ | | |
| I5 | 2 | 4 | 4 | 6 | 7 | 1 | -1 | 0 | -1 | -1 | 2 | \ | |

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FIG. 5

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1.   for (every GAP(n) >0 ){
2.     for(m = index(G_C) -1 ; m>=0 && GAP(n)>0; m--){
3.       if( m is in another GAP) break ;
4.       if( m has been moved) break ;
5.       if( DWN(m) > index(G_C) ){
6.         move m before index(G_C)+1 ;
7.         GAP(n) = GAP(n) - L0(m) ;
8.       }
9.     }
10.
11.    for(m = n +1 ; m<=last instruction && GAP(n)>0; m++){
12.      if( m is in another GAP) break ;
13.      if( m has been moved) break ;
14.      if( UP(m) < n ){
15.        move m after n-1 ;
16.        GAP(n) = GAP(n) - L0(m) ;
17.      }
18.    }
19.  }

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FIG. 6

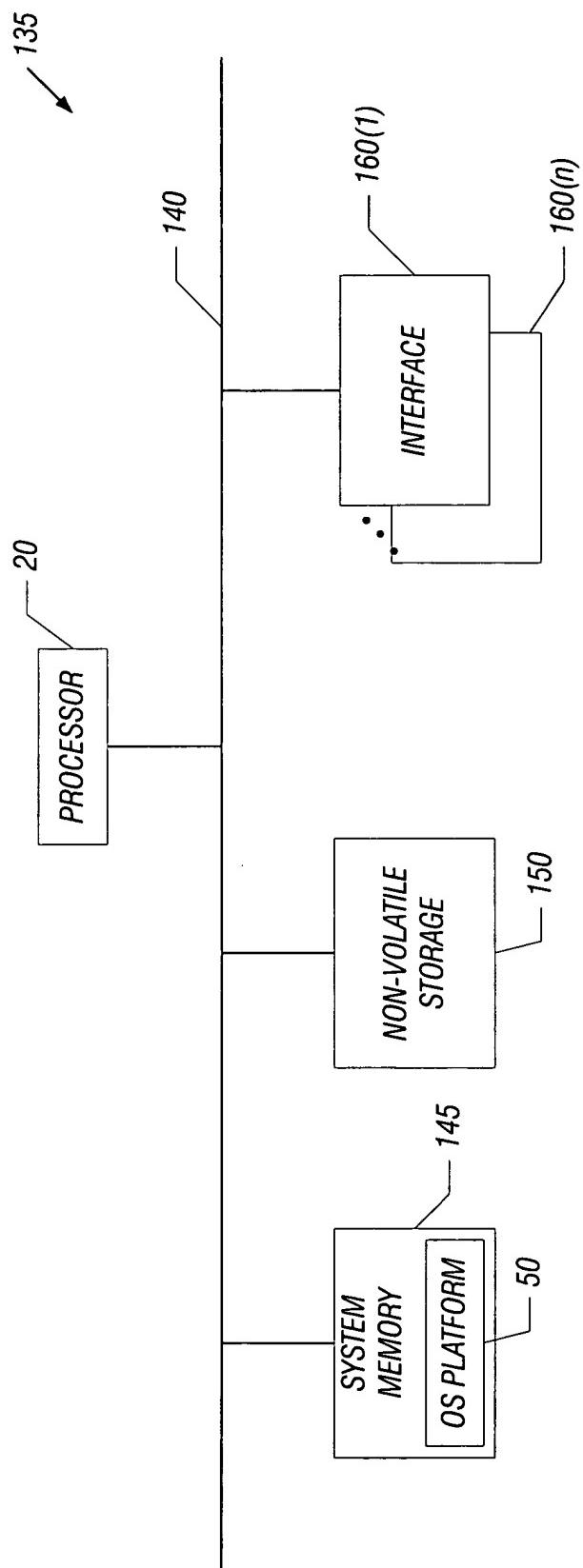


FIG. 7